



**REPORT 19M**

**U.S. DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE  
Public Health Service**

U.S. NATIONAL INSTITUTES OF HEALTH

# NEW GRANTS AND AWARDS

Arranged by State, City and Institution

Announced During

**SEPTEMBER 1973**

NIH LIBRARY

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1973  
Sept.

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PREPARED BY

NATIONAL INSTITUTES OF HEALTH

DIVISION OF RESEARCH GRANTS

STATISTICS AND ANALYSIS BRANCH



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SYMBOLS USED TO IDENTIFY THE SUPPORTING INSTITUTE OR DIVISION

|    |  |
|----|--|
| AI | NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES    |
| AM | NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES   |
| CA | NATIONAL CANCER INSTITUTE                                |
|    | CB DIVISION OF CANCER BIOLOGY AND DIAGNOSIS              |
|    | CN OFFICE OF CANCER CONTROL                              |
|    | CM DIVISION OF CANCER TREATMENT                          |
|    | CP DIVISION OF CANCER CAUSE AND PREVENTION               |
| CL | CLINICAL CENTER  |
| CT | DIVISION OF COMPUTER RESEARCH AND TECHNOLOGY             |
| DE | NATIONAL INSTITUTE OF DENTAL RESEARCH                    |
| ES | NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES      |
| EY | NATIONAL EYE INSTITUTE                                   |
| GM | NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES           |
| HD | NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT |
| HL | NATIONAL HEART AND LUNG INSTITUTE                        |
|    | HV DIVISION OF HEART AND VASCULAR DISEASES               |
|    | HB DIVISION OF BLOOD DISEASES AND RESOURCES              |
|    | HT DIVISION OF TECHNOLOGICAL APPLICATION                 |
|    | HR DIVISION OF LUNG DISEASES                             |
|    | HI DIVISION OF INTRAMURAL RESEARCH                       |
|    | HO OFFICE OF THE NHLI DIRECTOR                           |
| JT | JOINT (TWO OR MORE SUPPORTING INSTITUTES OR DIVISIONS)   |
| LM | NATIONAL LIBRARY OF MEDICINE                             |
| NS | NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND STROKE   |
| OD | OFFICE OF THE DIRECTOR, NIH                              |
| RG | DIVISION OF RESEARCH GRANTS                              |
| RR | DIVISION OF RESEARCH RESOURCES                           |
| RS | DIVISION OF RESEARCH SERVICES                            |
| TW | FOGARTY INTERNATIONAL CENTER                             |





## SUMMARY OF NEW GRANTS AND AWARDS ANNOUNCED DURING SEPTEMBER 1973 \*

| INSTITUTE<br>OR<br>DIVISION | NO. | RESEARCH<br>GRANTS | DOLLARS   | NO. | RESEARCH<br>CONTRACTS | DOLLARS   | NO. | MEDICAL<br>LIBRARY<br>GRANTS | DOLLARS |
|-----------------------------|-----|--------------------|-----------|-----|-----------------------|-----------|-----|------------------------------|---------|
|                             |     |                    |           |     |                       |           |     |                              |         |
| AI                          | 24  |                    | 749,771   | 1   |                       | 31,988    |     |                              |         |
| AM                          | 29  |                    | 1,117,138 | 1   |                       | 29,680    |     |                              |         |
| CA                          | 34  |                    | 2,030,357 |     |                       |           |     |                              |         |
| CB                          |     |                    |           | 2   |                       | 165,497   |     |                              |         |
| CM                          |     |                    |           | 1   |                       | 49,878    |     |                              |         |
| CN                          |     |                    |           | 3   |                       | 1,342,845 |     |                              |         |
| CP                          |     |                    |           | 1   |                       | 189,548   |     |                              |         |
| ES                          | 1   |                    | 58,500    |     |                       |           |     |                              |         |
| EY                          | 4   |                    | 246,965   | 1   |                       | 48,652    |     |                              |         |
| GM                          | 2   |                    | 44,450    |     |                       |           |     |                              |         |
| HL                          | 39  |                    | 3,895,163 |     |                       |           |     |                              |         |
| IM                          | 1   |                    | 30,213    |     |                       |           | 13  |                              | 113,478 |
| NS                          | 2   |                    | 371,540   |     |                       |           |     |                              |         |
| RR                          | 1   |                    | 126,772   |     |                       |           |     |                              |         |
| RS                          |     |                    |           | 1   |                       | 49,144    |     |                              |         |
|                             | 137 |                    | 8,670,869 | 11  |                       | 1,907,232 | 13  |                              | 113,478 |

\* INCLUDES DIRECT COSTS ONLY FOR RESEARCH GRANTS



NIH  
RESEARCH GRANTS \*

DOLLARS  
AWARDED

| GRANT NUMBER   | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL  | DOLLARS AWARDED                      |
|--|------------------------|---|--------------------------------------|
| ALABAMA<br>TALLADEGA<br>TALLADEGA COLLEGE<br>RR08105-01  | BACON, ARTHUR L        | SUPPORT FOR BIOMEDICAL STUDIES  | 126,772                              |
| INSTITUTION TOTAL  | 1                      |   | 126,772                              |
| CITY TOTAL   | 1                      |   | 126,772                              |
| STATE TOTAL  | 1                      |   | 126,772                              |
| ARIZONA<br>TUCSON<br>UNIVERSITY OF ARIZONA<br>HL16205-01   | FELTHAM, ROBERT D      | CONTROL OF REACTIONS OF COORDINATED LIGANDS   | 49,600                               |
| INSTITUTION TOTAL  | 1                      |   | 49,600                               |
| CITY TOTAL   | 1                      |   | 49,600                               |
| STATE TOTAL  | 1                      |   | 49,600                               |
| ARKANSAS<br>LITTLE ROCK<br>UNIVERSITY OF ARKANSAS MEDICAL CENTER<br>AM17558-01   | TUNG, ANTHONY K        | GLUCAGON BIOSYNTHESIS IN ISLETS OF LANGERHANS   | 16,079                               |
| INSTITUTION TOTAL  | 1                      |   | 16,079                               |
| CITY TOTAL   | 1                      |   | 16,079                               |
| STATE TOTAL  | 1                      |   | 16,079                               |
| CALIFORNIA<br>DAVIS<br>UNIVERSITY OF CALIFORNIA SYSTEM--UNIVERSITY OF CALIFORNIA AT DAVIS<br>AM16648-01<br>HANSSEN, ROBERT J<br>HL16087-01<br>LA MAR, GERD N<br>AI11837-01<br>SCI8IENSKI, ROBERT J<br>AM16173-01A1<br>WILSON, LOWELL D |                        | HORMONAL CONTROL OF MUSCLE PROTEIN DEGRADATION<br>STRUCTURAL AND DYNAMIC STUDY OF MODEL HEME COMPLEXES<br>CONTROL OF IGM AND IGG ANTIBODY SYNTHESIS<br>THE ADRENAL MITOCHONDRIAL HYDROXYLATING SYSTEM | 15,041<br>25,639<br>30,496<br>24,221 |
| INSTITUTION TOTAL  | 4                      |   | 95,397                               |
| CITY TOTAL   | 4                      |   | 95,397                               |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH GRANTS \*

DOLLARS  
AWARDED

| GRANT NUMBER   | PRINCIPAL INVESTIGATOR   | TITLE OF RESEARCH PROPOSAL   |                                      |
|--|--|--|--------------------------------------|
| CALIFORNIA<br>LA JOLLA<br>SALK INSTITUTE FOR BIOLOGICAL STUDIES<br>CA15058-01  | FRANCKE, BERTOLD R   | EARLY GENES OF POLYOMA VIRUS AND DNA REPLICATION   | 49,810                               |
| INSTITUTION TOTAL  | 1  |  | 49,810                               |
| SCRIPPS CLINIC AND RESEARCH FOUNDATION<br>AM16452-01A1   | CROSBY, WILLIAM H  | STUDY OF IRON METABOLISM   | 37,300                               |
| INSTITUTION TOTAL  | 1  |  | 37,300                               |
| UNIVERSITY OF CALIFORNIA SYSTEM--UNIVERSITY OF CALIFORNIA AT SAN DIEGO<br>CA15441-01<br>HL15230-01<br>CA15503-01<br>CA15240-01 | GITTES, RUBEN F<br>HOUGIE, CECIL<br>SATO, GORDON H<br>YUUDIM, SAID | DEPENDENCE OF CANCER OF THE PROSTATE ON HORMONES<br>GENETIC STUDY OF V. WILLEBRAND'S DISEASE AND HEMOPHILIA<br>STUDY OF TUMOR CELLS IN IMMUNOSUPPRESSED ANIMALS<br>INDUCTION OF NONSPECIFIC RESISTANCE TO SYNGENEIC TUMORS | 75,510<br>46,958<br>80,000<br>36,766 |
| INSTITUTION TOTAL  | 4  |  | 239,234                              |
| CITY TOTAL   | 6  |  | 326,344                              |
| LOMA LINDA<br>LOMA LINDA UNIVERSITY<br>CA14703-01<br>HL15655-01  | PHILLIPS, ROLAND L<br>POWER, GORDON G                              | EPIDEMIOLOGY OF CANCER IN ADVENTISTS - A LOW RISK GROUP<br>BLOOD FLOW AND GAS EXCHANGE IN THE PLACENTA AND LUNGS   | 170,280<br>20,575                    |
| INSTITUTION TOTAL  | 2  |  | 190,855                              |
| CITY TOTAL   | 2  |  | 190,855                              |
| LOS ANGELES<br>CEDARS-SINAI MEDICAL CENTER<br>AM16747-01A1   | ARIEFF, ALLEN I  | BLOOD BRAIN BARRIER AND CARBOHYDRATE METABOLISM  | 30,772                               |
| INSTITUTION TOTAL  | 1  |  | 30,772                               |
| UNIVERSITY OF CALIFORNIA SYSTEM--UNIVERSITY OF CALIFORNIA AT LOS ANGELES<br>HL16148-01   | SCHULTZE, RAYMOND G  | STUDY OF NEURAL CONTROL OF RENAL FUNCTION  | 25,143                               |
| INSTITUTION TOTAL  | 1  |  | 25,143                               |
| UNIVERSITY OF SOUTHERN CALIFORNIA<br>AM17236-01  | BERGMAN, RICHARD N   | QUANTITATIVE STUDIES OF METABOLIC DYNAMICS   | 28,423                               |
| INSTITUTION TOTAL  | 1  |  | 28,423                               |
| CITY TOTAL   | 3  |  | 84,338                               |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY



NIH  
RESEARCH GRANTS \*

DOLLARS  
AWARDED

| GRANT NUMBER   | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL                             |           |
|--|------------------------|--|-----------|
| CALIFORNIA<br>SAN FRANCISCO<br>INSTITUTE OF MEDICAL SCIENCES<br>HL16636-01A1             | OSBORN, JOHN J         | STUDY OF INTENSIVE CARE OF CRITICALLY ILL PATIENTS     | 60,000    |
| INSTITUTION TOTAL  | 1                      |  | 60,000    |
| UNIVERSITY OF CALIFORNIA SYSTEM--UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO<br>HL16251-01 | SINGER, THOMAS P       | MEMBRANE-BOUND ENZYMES IN HEART AND OTHER TISSUES      | 193,011   |
| INSTITUTION TOTAL  | 1                      |  | 193,011   |
| CITY TOTAL   | 2                      |  | 253,011   |
| STANFORD<br>STANFORD UNIVERSITY<br>CA15201-01  | BROWN, J MARTIN        | EXPERIMENTAL RADIOTHERAPY: BASIS AND MODIFICATION      | 43,826    |
| CA15461-01   | HUDSON, BRUCE S        | ELECTRONIC AND BUOYANT PROPERTIES OF ETHIDIUM AND DNA  | 50,312    |
| LM02074-01   | PAISLEY, WILLIAM J     | REVIEW OF LITERATURE ON INFORMATION NEEDED IN MEDICINE | 30,213    |
| GM20774-01   | ZATZ, LESLIE M         | ULTRASONIC CAMERA FOR SOFT TISSUE IMAGING: PART B      | 20,000    |
| INSTITUTION TOTAL  | 4                      |  | 144,351   |
| CITY TOTAL   | 4                      |  | 144,351   |
| STATE TOTAL  | 21                     |  | 1,094,296 |
| COLORADO<br>BOULDER<br>UNIVERSITY OF COLORADO<br>EY01263-01                              | BERG, HOWARD C         | PHOTOPHYSIOLOGY IN A BACTERIUM CONTAINING RHODOPSIN    | 27,650    |
| INSTITUTION TOTAL  | 1                      |  | 27,650    |
| CITY TOTAL   | 1                      |  | 27,650    |
| DENVER<br>CHILDREN'S ASTHMA RESEARCH INSTITUTE AND HOSPITAL<br>HL16074-01                | CROPP, GERD J          | EXERCISE-INDUCED BRONCHOSPASM                          | 54,911    |
| INSTITUTION TOTAL  | 1                      |  | 54,911    |
| UNIVERSITY OF COLORADO MEDICAL CENTER<br>AT11636-01                                      | COHEN, SEYMOUR S       | STUDIES ON NORMAL AND VIRUS-INFECTED ANIMAL CELLS      | 88,754    |
| INSTITUTION TOTAL  | 1                      |  | 88,754    |
| CITY TOTAL   | 2                      |  | 143,665   |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH GRANTS \*

DOLLARS  
AWARDED

| GRANT NUMBER                            | PRINCIPAL INVESTIGATOR    | TITLE OF RESEARCH PROPOSAL                               | DOLLARS AWARDED |
|---|---------------------------|--|-----------------|
| STATE TOTAL                             | 3                         | 171,315  |                 |
| CONNECTICUT                             |                           |  |                 |
| FARMINGTON                              |                           |  |                 |
| UNIVERSITY OF CONNECTICUT HEALTH CENTER |                           |  |                 |
| AM16678-01A1                            | CINTI, DOMINICK L         | ROLE OF THE MITOCHONDRIA IN HEPATIC DRUG METABOLISM      | 29,963          |
| AM17220-01                              | TANZER, MARVIN L          | BIOLOGY AND CHEMISTRY OF PROCOLLAGEN IN CELL CULTURE     | 40,140          |
| INSTITUTION TOTAL                       | 2                         | 70,103   |                 |
| CITY TOTAL                              | 2                         | 70,103   |                 |
| NEW HAVEN                               |                           |  |                 |
| YALE UNIVERSITY                         |                           |  |                 |
| CA14655-01                              | BODEL, PHYLLIS T          | CAUSE OF FEVER IN MALIGNANT DISEASES                     | 56,711          |
| CA15044-01                              | MANUELIDIS, LAURA M       | PATHOGENETIC DETERMINANTS OF HUMAN CNS TUMORS            | 27,216          |
| HL16126-01                              | NEMERSON, YALE R          | ATHEROSCLEROSIS, COAGULATION AND THROMBOSIS              | 311,271         |
| INSTITUTION TOTAL                       | 3                         | 395,198  |                 |
| CITY TOTAL                              | 3                         | 395,198  |                 |
| STATE TOTAL                             | 5                         | 465,301  |                 |
| DIST OF COL                             |                           |  |                 |
| WASHINGTON                              |                           |  |                 |
| HOWARD UNIVERSITY                       |                           |  |                 |
| CA15448-01                              | JACKSON, MARVIN A         | EPIDEMIOLOGIC STUDY OF PROSTATIC CARCINOMA               | 114,021         |
| INSTITUTION TOTAL                       | 1                         | 114,021  |                 |
| WASHINGTON HOSPITAL                     |                           |  |                 |
| HL16262-01                              | CENTER<br>REBA, RICHARD C | SYNTHESIS OF MOLECULES FOR MYOCARDIAL IMAGING            | 36,784          |
| INSTITUTION TOTAL                       | 1                         | 36,784   |                 |
| CITY TOTAL                              | 2                         | 150,805  |                 |
| STATE TOTAL                             | 2                         | 150,805  |                 |
| FLORIDA                                 |                           |  |                 |
| MIAMI                                   |                           |  |                 |
| UNIVERSITY OF MIAMI                     |                           |  |                 |
| AM17179-01                              | ADACHI, KENJI             | STUDY OF ROLE OF CYCLIC AMP IN PATHOGENESIS OF PSORIASIS | 30,000          |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH GRANTS \*

| GRANT NUMBER  | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL                             | DOLLARS AWARDED |
|---|------------------------|--|-----------------|
| FLORIDA   |                        |  |                 |
| MIAMI   |                        |  |                 |
| UNIVERSITY OF MIAMI   |                        |  |                 |
| HL16117-01  | PALMER, ROGER F        | CELLULAR STUDY OF CARDIOVASCULAR FUNCTION              | 385,310         |
| INSTITUTION TOTAL   | 2                      | 415,310  |                 |
| CITY TOTAL  | 2                      | 415,310  |                 |
| STATE TOTAL   | 2                      | 415,310  |                 |
| ILLINOIS  |                        |  |                 |
| CHICAGO   |                        |  |                 |
| HEKTOEN INSTITUTE FOR MEDICAL RESEARCH                                  |                        |  |                 |
| HL16276-01  | THAEMERT, JONA C       | ULTRASTRUCTURE OF THE CONDUCTION SYSTEM OF THE HEART   | 25,000          |
| INSTITUTION TOTAL   | 1                      | 25,000   |                 |
| NORTHWESTERN UNIVERSITY   |                        |  |                 |
| AI11644-01  | DUNCAN, JAMES L        | STUDY OF ACTION OF STREPTOLYSIN O ON CELL MEMBRANES    | 18,922          |
| AI11759-01  | PATTERSON, ROY         | CLINICAL & LABORATORY STUDIES RELATING TO LUNG DISEASE | 61,759          |
| INSTITUTION TOTAL   | 2                      | 80,681   |                 |
| RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER                             |                        |  |                 |
| CA15281-01  | NONOYAMA, MEIHAN       | ONCOGENICITY OF EPSTEIN-BARR VIRUS                     | 44,500          |
| INSTITUTION TOTAL   | 1                      | 44,500   |                 |
| UNIVERSITY OF ILLINOIS SYSTEM--UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE |                        |  |                 |
| EY01261-01  | MC CORMICK, BRUCE H    | IMAGE PROCESSING FOR CLINICAL OPHTHALMOSCOPY           | 189,130         |
| INSTITUTION TOTAL   | 1                      | 189,130  |                 |
| CITY TOTAL  | 5                      | 339,311  |                 |
| STATE TOTAL   | 5                      | 339,311  |                 |
| INDIANA   |                        |  |                 |
| INDIANAPOLIS  |                        |  |                 |
| INDIANA UNIVERSITY SYSTEM--INDIANA UNIVERSITY AT INDIANAPOLIS           |                        |  |                 |
| CA15501-01  | HADD, HARRY E          | POTENTIAL SCREENING AGENT FOR CANCER OF THE PROSTATE   | 35,500          |
| INSTITUTION TOTAL   | 1                      | 35,500   |                 |
| CITY TOTAL  | 1                      | 35,500   |                 |

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NIH  
RESEARCH GRANTS \*

| GRANT NUMBER  | PRINCIPAL INVESTIGATOR                 | TITLE OF RESEARCH PROPOSAL   | DOLLARS AWARDED  |
|---|--|--|------------------|
| INDIANA<br>LAFAYETTE<br>PURDUE UNIVERSITY<br>AI11728-01             | FLOSS, HEINZ G                         | STUDIES ON BIOLOGICALLY ACTIVE MICROBIAL METABOLITES   | 64,538           |
| INSTITUTION TOTAL<br>CITY TOTAL                                     | 1<br>1                                 |  | 64,538           |
| NOTRE DAME<br>UNIVERSITY OF NOTRE DAME<br>AM17049-01                | NOWAK, THOMAS                          | NMR STUDIES OF METALS IN KINASES AND RELATED ENZYMES   | 27,000           |
| INSTITUTION TOTAL<br>CITY TOTAL                                     | 1<br>1                                 |  | 27,000           |
| STATE TOTAL   | 3                                      |  | 127,038          |
| IOWA<br>IOWA CITY<br>UNIVERSITY OF IOWA<br>AI11648-01<br>CAL5084-01 | SURZYCKI, STEFAN J<br>THOMPSON, JOHN S | ADENOVIRUS GENE EXPRESSION IN VITRO AND IN VIVO<br>IMMUNOSUPPRESSIVE FACTORS IN HEPATOMA SERA & CORD BLOOD | 10,828<br>44,074 |
| INSTITUTION TOTAL<br>CITY TOTAL                                     | 2<br>2                                 |  | 54,902<br>54,902 |
| STATE TOTAL   | 2                                      |  | 54,902           |
| KANSAS<br>KANSAS CITY<br>UNIVERSITY OF KANSAS<br>HL16102-01         | POISNER, ALAN M                        | THE CONTROL OF RENIN IN THE ADRENAL MEDULLA  | 11,226           |
| INSTITUTION TOTAL<br>CITY TOTAL                                     | 1<br>1                                 |  | 11,226<br>11,226 |
| STATE TOTAL   | 1                                      |  | 11,226           |
| KENTUCKY<br>LEXINGTON<br>UNIVERSITY OF KENTUCKY<br>AM17082-01       | MILLER, RALPH E                        | NEURAL REGULATION OF INSULIN SECRETION RATE  | 47,826           |
| INSTITUTION TOTAL<br>* DOLLARS AWARDED INCLUDE DIRECT COST ONLY     | 1<br>1                                 |  | 47,826           |



NIH  
RESEARCH GRANTS \*DOLLARS  
AWARDED

| GRANT NUMBER  | PRINCIPAL INVESTIGATOR                                | TITLE OF RESEARCH PROPOSAL  | DOLLARS AWARDED             |
|---|---|---|-----------------------------|
| CITY TOTAL  | 1   | 47,826  |                             |
| KENTUCKY<br>LOUISVILLE<br>UNIVERSITY OF LOUISVILLE<br>HL16239-01                            | MEYER, JOHN R   | CAROTID BODY CONTROL OF VENTILATION   | 57,170                      |
| INSTITUTION TOTAL   | 1   | 57,170  |                             |
| CITY TOTAL  | 1   | 57,170  |                             |
| STATE TOTAL   | 2   | 104,996   |                             |
| LOUISIANA<br>NEW ORLEANS<br>TULANE UNIVERSITY<br>HL15813-01                                 | HEWITT, ROBERT L                                      | CARDIAC ANOXIA: PROTECTIVE EFFECT OF CARBOHYDRATE   | 32,446                      |
| INSTITUTION TOTAL   | 1   | 32,446  |                             |
| CITY TOTAL  | 1   | 32,446  |                             |
| STATE TOTAL   | 1   | 32,446  |                             |
| MAINE<br>BAR HARBOR<br>JACKSON LABORATORY<br>HL16119-01                                     | HARRISON, DAVID E                                     | STUDY OF BONE-MARROW ALLOGRAFTS IN ANEMIC MICE  | 35,150                      |
| INSTITUTION TOTAL   | 1   | 35,150  |                             |
| CITY TOTAL  | 1   | 35,150  |                             |
| STATE TOTAL   | 1   | 35,150  |                             |
| MARYLAND<br>BALTIMORE<br>JOHNS HOPKINS UNIVERSITY<br>CA15442-01<br>CA15161-01<br>CA15396-01 | COFFEY, DONALD S<br>ROSEMAN, SAUL<br>SANTOS, GEORGE W | STUDY OF SKIN RESPONSE IN PROSTATIC CANCER<br>BIOCHEMISTRY OF NORMAL AND MALIGNANT CELL SURFACES<br>STUDY OF TRANSPLANTATION OF BONE MARROW | 45,805<br>60,454<br>110,135 |
| INSTITUTION TOTAL   | 3   | 216,394   |                             |
| CITY TOTAL  | 3   | 216,394   |                             |
| STATE TOTAL   | 3   | 216,394   |                             |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH GRANTS \*

| GRANT NUMBER  | PRINCIPAL INVESTIGATOR                                     | TITLE OF RESEARCH PROPOSAL   | DOLLARS AWARDED             |
|---|--|--|-----------------------------|
| MASSACHUSETTS<br>BOSTON<br>BOSTON HEALTH AND HOSPITALS DEPARTMENT--BOSTON CITY HOSPITAL<br>CA15952-01 | REIF, ARNOLD E   | EXPERIMENTAL STUDIES ON IMMUNITY TO CANCER CELLS   | 58,422                      |
| INSTITUTION TOTAL   | 1  | 58,422   |                             |
| CHILDREN'S HOSPITAL<br>HL15526-01A1   | MEDICAL CENTER<br>WOHL, MARY B                             | RESPIRATORY MECHANICS IN CHILDREN  | 38,423                      |
| INSTITUTION TOTAL   | 1  | 38,423   |                             |
| HARVARD UNIVERSITY<br>HL15797-01<br>CA14794-01<br>CA15155-01  | HAYES, KENNETH C<br>MACDONALD, A BRUCE<br>MOYLE, WILLIAM R | LIPID METABOLISM AND ATHEROSCLEROSIS IN PRIMATES<br>IMMUNE RESPONSE TO ONCOGENIC HERPESVIRUSES IN MONKEYS<br>CYCLIC AMP: ROLE IN ADRENAL TUMOR STEROIDOGENESIS | 60,000<br>76,732<br>30,495  |
| INSTITUTION TOTAL   | 3  | 167,227  |                             |
| MASSACHUSETTS GENERAL HOSPITAL<br>GM20667-01<br>HL15860-01<br>HL16154-01                              | BARNES, BENJAMIN A<br>SMITH, THOMAS W<br>ZAPOL, WARREN M   | SKIN ALLOGRAFT FACILITATION BY PRIOR TISSUE CULTURE<br>IMAGING OF NORMAL AND ISCHEMIC MYOCARDIUM<br>MEMBRANE LUNG PERFUSION FOR ACUTE RESPIRATORY FAILURE      | 24,450<br>155,000<br>41,110 |
| INSTITUTION TOTAL   | 3  | 220,560  |                             |
| NEW ENGLAND MEDICAL CENTER HOSPITALS<br>A111827-01<br>A116826-01                                      | BABIOR, BERNARD M<br>POHL, STEPHEN L                       | THE FUNCTION OF NORMAL AND MALIGNANT PHAGOCYtic CELLS<br>MECHANISMS OF POLYPEPTIDE HORMONE ACTION  | 15,885<br>34,244            |
| INSTITUTION TOTAL   | 2  | 50,129   |                             |
| ROBERT B. BRIGHAM HOSPITAL<br>A111729-01  | ROCKLIN, ROSS E  | MECHANISMS OF CELLULAR HYPERSENSITIVITY IN MAN   | 40,173                      |
| INSTITUTION TOTAL   | 1  | 40,173   |                             |
| ST. ELIZABETH'S HOSPITAL OF BOSTON<br>HL16217-01  | STUHLMAN, FREDERICK, JR                                    | 02 DISSOCIATION CURVE AND ERYTHROPOIETIN PRODUCTION  | 38,900                      |
| INSTITUTION TOTAL<br>CITY TOTAL   | 1<br>12  | 38,900<br>613,834  |                             |
| CAMBRIDGE<br>BIO-RESEARCH INSTITUTE<br>CA15425-01   | HOMBURGER, FREDDY  | COLONIC CANCER IN INBRED SYRIAN HAMSTERS   | 34,000                      |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH GRANTS \*

DOLLARS  
AWARDED

| GRANT NUMBER                                  | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL                          |         |
|---|------------------------|---|---------|
| INSTITUTION TOTAL                             | 1                      |   | 34,000  |
| CITY TOTAL                                    | 1                      |   | 34,000  |
| MASSACHUSETTS                                 |                        |   |         |
| SHREWSBURY                                    |                        |   |         |
| WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY |                        |   |         |
| CA15360-01                                    | BARIL, EARL F          | CARCINOSTATIC AGENTS: MECHANISMS OF ACTION          | 31,350  |
| INSTITUTION TOTAL                             | 1                      |   | 31,350  |
| CITY TOTAL                                    | 1                      |   | 31,350  |
| STATE TOTAL                                   | 14                     |   | 679,184 |
| MICHIGAN                                      |                        |   |         |
| ANN ARBOR                                     |                        |   |         |
| UNIVERSITY OF MICHIGAN                        |                        |   |         |
| AM16751-01                                    | BERNSTEIN, I A         | EPIDERMAL BIOCHEMISTRY CONFERENCE                   | 7,540   |
| INSTITUTION TOTAL                             | 1                      |   | 7,540   |
| CITY TOTAL                                    | 1                      |   | 7,540   |
| HOLLAND                                       |                        |   |         |
| HOPE COLLEGE                                  |                        |   |         |
| HL16049-01                                    | HOEPFFINGER, LYNN M    | ISOLATION AND PROPERTIES OF BOVINE KIDNEY UROKINASE | 9,380   |
| INSTITUTION TOTAL                             | 1                      |   | 9,380   |
| CITY TOTAL                                    | 1                      |   | 9,380   |
| STATE TOTAL                                   | 2                      |   | 16,920  |
| MINNESOTA                                     |                        |   |         |
| ROCHESTER                                     |                        |   |         |
| MAYO FOUNDATION                               |                        |   |         |
| AM17174-01                                    | MC DUFFIE, FREDERIC C  | IMMUNE COMPLEXES IN RHEUMATOID ARTHRITIS            | 42,566  |
| AM12054-01                                    | STOBO, JOHN D          | STUDY OF ROLE OF MURINE THYMUS-DERIVED LYMPHOCYTES  | 25,630  |
| INSTITUTION TOTAL                             | 2                      |   | 68,196  |
| CITY TOTAL                                    | 2                      |   | 68,196  |
| STATE TOTAL                                   | 2                      |   | 68,196  |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH GRANTS \*

DOLLARS  
AWARDED

| GRANT NUMBER  | PRINCIPAL INVESTIGATOR  | TITLE OF RESEARCH PROPOSAL   | DOLLARS AWARDED                                |
|---|---|--|--|
| MISSOURI<br>SAINT LOUIS<br>WASHINGTON UNIVERSITY<br>CA15306-01<br>HL16118-01  | LYNCH, RICHARD G<br>PIERCE, JOHN A  | MECHANISMS OF IMMUNOSUPPRESSION OF MURINE MYELOMA<br>STUDY OF EMPHYSEMA  | 43,758<br>239,426                              |
| INSTITUTION TOTAL<br>CITY TOTAL   | 2<br>2  | 283,184<br>283,184   |  |
| STATE TOTAL   | 2   | 283,184  |  |
| MONTANA<br>BOZEMAN<br>MONTANA STATE UNIVERSITY<br>AI11625-01  | JUTILA, JOHN W  | MEDICAL SIGNIFICANCE OF ANTI-IG IMMUNOSUPPRESSION  | 15,000   |
| INSTITUTION TOTAL<br>CITY TOTAL   | 1<br>1  | 15,000<br>15,000   |  |
| STATE TOTAL   | 1   | 15,000   |  |
| NEW YORK<br>ALBANY<br>NEW YORK STATE DEPARTMENT OF HEALTH<br>AI11717-01   | MEUNISSEN, HILAIRE J  | ADENOSINE DEAMINASE DEFICIENCY IN IMMUNOLOGICAL DISEASE  | 33,747   |
| INSTITUTION TOTAL   | 1   | 33,747   |  |
| UNION COLLEGE AND UNIVERSITY SYSTEM--ALBANY MEDICAL COLLEGE<br>EY00794-01A2   | TSAPOGAS, MAKIS J   | THROMBOLYTIC THERAPY IN RETINAL VASCULAR OCCLUSION   | 15,645   |
| INSTITUTION TOTAL<br>CITY TOTAL   | 1<br>2  | 15,645<br>49,392   |  |
| BUFFALO<br>NEW YORK STATE DEPARTMENT OF HEALTH--ROSWELL PARK MEMORIAL INSTITUTE<br>CA15502-01<br>CA15437-01<br>CA15263-01<br>CA15162-01<br>CA15436-01 | CARTER, WILLIAM A<br>CHU, TSANN M<br>HOLYOKE, EDWARD D<br>MORREAL, CHARLES E<br>SANDBERG, AVERY A | "VIRIOGENE" IN PROSTATIC TISSUE AND FLUIDS<br>CARCINO-FETAL ANTIGENS IN PROSTATIC CANCERS<br>IMMUNE STATUS: GASTROINTESTINAL TUMOR (COLON)<br>MECHANISMS OF HYDROCARBON CARCINOGENESIS IN THE RAT<br>TEST SYSTEMS FOR DRUGS AGAINST PROSTATIC CANCER | 59,484<br>49,353<br>68,528<br>40,018<br>31,685 |
| INSTITUTION TOTAL   | 5   | 249,068  |  |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY



NIH  
RESEARCH GRANTS \*

| GRANT NUMBER  | PRINCIPAL INVESTIGATOR            | TITLE OF RESEARCH PROPOSAL  | DOLLARS AWARDED  |
|---|-----------------------------------|---|------------------|
| NEW YORK<br>BUFFALO<br>STATE UNIVERSITY OF NEW YORK AT BUFFALO<br>HL16135-01          | HOGAN, PERRY M                    | MECHANISMS OF CARDIAC AUTORHYTHMICITY   | 15,067           |
| INSTITUTION TOTAL<br>CITY TOTAL   | 1<br>6                            |   | 264,135          |
| IITHACA<br>CORNELL UNIVERSITY<br>CA114989-01  | WU, RAY                           | ANALYSIS OF DNA SEQUENCE IN POLYOMA AND SV40 TUMOR VIRUS  | 47,310           |
| INSTITUTION TOTAL<br>CITY TOTAL   | 1<br>1                            |   | 47,310           |
| NEW YORK<br>CITY UNIVERSITY OF NEW YORK--MOUNT SINAI SCHOOL OF MEDICINE<br>AM17113-01 | ORLOWSKI, MARIAN                  | 5-OXOPROLINE, AMINOACIDURIAS AND MENTAL RETARDATION   | 25,084           |
| INSTITUTION TOTAL   | 1                                 |   | 25,084           |
| COLUMBIA UNIVERSITY<br>EY01253-01<br>HL16082-01                                       | NAKANISHI, KOJI<br>REUBEN, JOHN P | STRUCTURAL AND CONFORMATIONAL STUDIES OF VISUAL PIGMENTS<br>TENSION REGULATION IN HEART AND SKELETAL MUSCLE | 14,540<br>19,500 |
| INSTITUTION TOTAL   | 2                                 |   | 34,040           |
| CORNELL UNIVERSITY MEDICAL COLLEGE<br>HL16246-01                                      | ENGLE, MARY ALLEN E               | IMMUNOLOGIC STUDIES IN POSTPERICARDIOTOMY SYNDROME  | 43,837           |
| INSTITUTION TOTAL   | 1                                 |   | 43,837           |
| MONTEFIORE HOSPITAL AND MEDICAL CENTER<br>AM15796-01A1                                | HAMERMAN, DAVID J                 | SYNOVIAL CELLS AND THE ETIOLOGY OF RHEUMATOID ARTHRITIS   | 47,536           |
| INSTITUTION TOTAL   | 1                                 |   | 47,536           |
| NEW YORK ACADEMY OF SCIENCES<br>HL16323-01  | ASKARI, AMIR                      | PROPERTIES AND FUNCTIONS OF NA+, K+-ATPASE  | 17,000           |
| INSTITUTION TOTAL   | 1                                 |   | 17,000           |
| ROCKEFELLER UNIVERSITY<br>AI11822-01  | FISCHEITTI, VINCENT A             | PROPERTIES OF STREPTOCOCCAL M-PROTEINS  | 26,752           |
| INSTITUTION TOTAL   | 1                                 |   | 26,752           |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH GRANTS \*

| GRANT NUMBER   | PRINCIPAL INVESTIGATOR  | TITLE OF RESEARCH PROPOSAL  | DOLLARS AWARDED                      |
|--|---|---|--------------------------------------|
| NEW YORK<br>NEW YORK<br>ST. LUKE'S HOSPITAL<br>AM17200-01<br>AM17191-01                      | BERNSTEIN, ROBERT S<br>HASHIM, SAMI A                                   | REGULATION OF ADIPOCYTE INSULIN SENSITIVITY<br>MEDIUM CHAIN FATS: PHYSIOLOGY & CLINICAL IMPLICATIONS  | 29,587<br>50,350                     |
| INSTITUTION TOTAL  | 2   | 79,937  |                                      |
| STATE UNIVERSITY OF<br>AM17001-01  | NEW YORK--DOWNSTATE MEDICAL CENTER<br>KOUNTZ, SAMUEL L                  | COMBINATION IMMUNOSUPPRESSION IN KIDNEY TRANSPLANTS   | 59,000                               |
| INSTITUTION TOTAL  | 1   | 59,000  |                                      |
| YESHIVA UNIVERSITY<br>CA14770-01<br>HL16137-01   | MUGLIA, FRANCO M<br>SCARPELLI, EMILE M                                  | HUMAN TUMOR CELL KINETICS: EFFECT OF TREATMENT<br>ALVEOLAR BIOLOGY  | 33,516<br>402,631                    |
| INSTITUTION TOTAL  | 2   | 436,147   |                                      |
| CITY TOTAL   | 12  | 769,333   |                                      |
| ROCHESTER<br>UNIVERSITY OF ROCHESTER<br>AM16939-01<br>A111558-01<br>ES00965-01<br>A111427-01 | CHEY, WILLIAM Y<br>KAPLER, JOHN W<br>POLAND, ALAN P<br>WILHELM, JAMES M | RADIOIMMUNOASSAY OF SECRETIN AND GASTRIN<br>REGULATORY MECHANISMS IN THE IMMUNE RESPONSE<br>STUDY OF TOXICITY OF CHLORINATED DIBENZO-P-DIOXINS<br>STUDIES OF VIRUS REPLICATION AND TRANSFORMATION | 30,534<br>31,959<br>58,500<br>44,994 |
| INSTITUTION TOTAL  | 4   | 165,987   |                                      |
| CITY TOTAL   | 4   | 165,987   |                                      |
| STONY BROOK<br>STATE UNIVERSITY OF<br>CA15300-01   | NEW YORK AT STONY BROOK<br>LAUTERBUR, PAUL C                            | APPLICATION OF NMR ZEUGMATOGRAPHY IN CANCER RESEARCH  | 200,000                              |
| INSTITUTION TOTAL  | 1   | 200,000   |                                      |
| CITY TOTAL   | 1   | 200,000   |                                      |
| UPTON<br>ASSOCIATED UNIVERSITIES--BROOKHAVEN NATIONAL LABORATORY<br>NS11131-01               | COTZIAS, GEORGE C   | EXTRAPYRAMIDAL AND RELATED BEHAVIORAL DISORDERS   | 346,940                              |
| INSTITUTION TOTAL  | 1   | 346,940   |                                      |
| CITY TOTAL   | 1   | 346,940   |                                      |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH GRANTS \*

DOLLARS  
AWARDED

| GRANT NUMBER   | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL                          | DOLLARS AWARDED |
|--|------------------------|---|-----------------|
| STATE TOTAL  | 27                     | 1,843,097   |                 |
| NORTH CAROLINA   |                        |   |                 |
| CHAPEL HILL  |                        |   |                 |
| UNIVERSITY OF NORTH CAROLINA SYSTEM--UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL |                        |   |                 |
| AM17076-01   | FALLON, HAROLD J       | REGULATION OF ADIPOSE LIPID METABOLISM              | 24,983          |
| INSTITUTION TOTAL  | 1                      | 24,983  |                 |
| CITY TOTAL   | 1                      | 24,983  |                 |
| DURHAM   |                        |   |                 |
| DUKE UNIVERSITY  |                        |   |                 |
| AM17253-01   | GOLDSMITH, LOWELL A    | STRUCTURAL PROTEINS IN GENETIC DEFECTS OF EPIDERMIS | 32,000          |
| INSTITUTION TOTAL  | 1                      | 32,000  |                 |
| CITY TOTAL   | 1                      | 32,000  |                 |
| STATE TOTAL  | 2                      | 56,983  |                 |
| OHIO   |                        |   |                 |
| CINCINNATI   |                        |   |                 |
| UNIVERSITY OF CINCINNATI   |                        |   |                 |
| AM11690-01   | MACOMBER, ROGER S      | STUDY OF SYNTHESIS OF TRICYCLIC ACETYLENE           | 17,120          |
| INSTITUTION TOTAL  | 1                      | 17,120  |                 |
| CITY TOTAL   | 1                      | 17,120  |                 |
| CLEVELAND  |                        |   |                 |
| CASE WESTERN RESERVE UNIVERSITY  |                        |   |                 |
| AM11849-01   | MOSTOW, STEVEN R       | LABORATORY MARKER OF INFLUENZA VIRUS VIRULENCE      | 15,363          |
| AM11298-01A1   | SHUSTER, CHARLES W     | REGULATION OF CELL WALL GROWTH                      | 28,350          |
| INSTITUTION TOTAL  | 2                      | 43,713  |                 |
| CLEVELAND CLINIC HOSPITAL  |                        |   |                 |
| AM17562-01   | HOLZBACH, R THOMAS     | STUDY OF FACTORS IN PRECIPITATION OF CHOLESTEROL    | 33,905          |
| INSTITUTION TOTAL  | 1                      | 33,905  |                 |
| CITY TOTAL   | 3                      | 77,618  |                 |
| STATE TOTAL  | 4                      | 94,738  |                 |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH GRANTS \*

DOLLARS  
AWARDED

| GRANT NUMBER  | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL                             | DOLLARS<br>AWARDED |
|---|------------------------|--|--------------------|
| PENNSYLVANIA<br>PHILADELPHIA<br>TEMPLE UNIVERSITY<br>AM16348-01 | BODEN, GUENTHER        | INFLUENCE OF ENDOGENOUS SECRETIN ON INSULIN REGULATION | 33,962             |

|                            |                  |   |           |
|----------------------------|------------------|---|-----------|
| INSTITUTION TOTAL          | 1                | 33,962  |           |
| UNIVERSITY OF PENNSYLVANIA |                  |   |           |
| HL16642-01                 | COLMAN, ROBERT W | BIOCHEMISTRY AND PATHOPHYSIOLOGY OF PLASMA KALLIKREIN | 51,800    |
| HL15622-01A1               | GARFINKEL, DAVID | COMPUTER SIMULATION OF CARDIAC METABOLISM             | 86,974    |
| HL16152-01                 | MORAD, MARTIN    | ELECTROPHYSIOLOGICAL STUDY OF HEART ACTION            | 47,990    |
| HL15835-01                 | SOMLYO, ANDREW P | STUDY OF MUSCLES RELATED TO HEART DISEASE             | 1,039,904 |
| HL16201-01                 | WILEY, JAMES S   | REGULATION OF CELL VOLUME IN DISEASE STATES           | 38,787    |

|                   |   |           |  |
|-------------------|---|-----------|--|
| INSTITUTION TOTAL | 5 | 1,265,455 |  |
| CITY TOTAL        | 6 | 1,299,417 |  |

|  |                    |   |        |
|--|--------------------|---|--------|
| UNIVERSITY PARK<br>PENNSYLVANIA STATE UNIVERSITY |                    |   |        |
| HL16647-01                                       | HASS, LOUIS F      | STUDIES ON THE CONTROL OF SICKLE CELL CRISIS          | 48,439 |
| AI11598-01                                       | KARAKAWA, WALTER W | ROLE OF SURFACE ANTIGENS IN STAPHYLOCOCCAL INFECTIONS | 35,723 |
| AI11513-01                                       | PERSON, STANLEY    | THE MECHANISM OF VIRUS INDUCED CELL FUSION            | 38,010 |

|                   |   |           |  |
|-------------------|---|-----------|--|
| INSTITUTION TOTAL | 3 | 122,172   |  |
| CITY TOTAL        | 3 | 122,172   |  |
| STATE TOTAL       | 9 | 1,421,589 |  |

|   |               |                                      |        |
|---|---------------|--------------------------------------|--------|
| TENNESSEE<br>NASHVILLE<br>MEHARRY MEDICAL COLLEGE |               |                                      |        |
| AM16802-01  | ZELMAN, ALLEN | A THIRD GENERATION ARTIFICIAL KIDNEY | 30,000 |

|                   |   |        |  |
|-------------------|---|--------|--|
| INSTITUTION TOTAL | 1 | 30,000 |  |
|-------------------|---|--------|--|

|                       |                   |   |         |
|-----------------------|-------------------|---|---------|
| VANDERBILT UNIVERSITY |                   |   |         |
| AM17026-01            | CROFFORD, OSCAR B | VANDERBILT UNIVERSITY DIABETES-ENDOCRINOLOGY CENTER | 218,033 |
| AM16129-01            | EXTON, JOHN H     | HEPATIC METABOLISM IN DIABETES AND OBESITY          | 22,996  |

|                   |   |         |  |
|-------------------|---|---------|--|
| INSTITUTION TOTAL | 2 | 241,029 |  |
| CITY TOTAL        | 3 | 271,029 |  |
| STATE TOTAL       | 3 | 271,029 |  |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY



NIH  
RESEARCH GRANTS \*

DOLLARS  
AWARDED

| GRANT NUMBER   | PRINCIPAL INVESTIGATOR   | TITLE OF RESEARCH PROPOSAL  |         |
|--|--|---|---------|
| TEXAS<br>DALLAS<br>UNIVERSITY OF TEXAS SYSTEM--UNIVERSITY OF TEXAS<br>AI11630-01 | KEITMAN, JOHN R, JR  | HEALTH SCIENCE CENTER AT DALLAS<br>THE RELATION OF HUMORAL AND CELL MEDIATED IMMUNITIES | 28,217  |
| INSTITUTION TOTAL  | 1  |   | 28,217  |
| CITY TOTAL   | 1  |   | 28,217  |
| <br>GALVESTON<br>UNIVERSITY OF TEXAS SYSTEM--UNIVERSITY OF TEXAS<br>CA15419-01   | GOLDSTEIN, ALLAN L   | MEDICAL BRANCH AT GALVESTON<br>ROLE OF THYMOSIN IN DEVELOPMENTAL AND AGING PROCESSES    | 53,000  |
| INSTITUTION TOTAL  | 1  |   | 53,000  |
| CITY TOTAL   | 1  |   | 53,000  |
| <br>HOUSTON<br>BAYLOR COLLEGE OF MEDICINE<br>CA15149-01                          | BUTEL, JANET S   | THE DNA-TRANSFER METHOD OF VIRUS RESCUE   | 36,902  |
| HL15706-01   | COLE, JAMES S  | DEVELOPMENT OF A PULSED DOPPLER VELOCITY DETECTOR                                       | 23,066  |
| AM17307-01   | KOHLER, PETER O  | HORMONE PRODUCTION IN CULTURED ENDOCRINE CELLS  | 47,347  |
| INSTITUTION TOTAL  | 3  |   | 107,315 |
| <br>UNIVERSITY OF TEXAS SYSTEM--UNIVERSITY OF TEXAS<br>CA15009-01                | M. D. ANDERSON HOSPITAL AND TUMOR INSTITUTE<br>GUTTERMAN, JORDAN U | CELL-ASSOCIATED TUMOR IMMUNITY IN ACUTE LEUKEMIA  | 38,344  |
| INSTITUTION TOTAL  | 1  |   | 38,344  |
| CITY TOTAL   | 4  |   | 145,659 |
| <br>LUBBOCK<br>TEXAS TECH UNIVERSITY<br>HL16244-01                               | HOLLOWAY, LEWIS S, JR  | THE ROLE OF THE CENTRAL NERVOUS SYSTEM IN SEPTIC SHOCK                                  | 22,502  |
| HL16240-01   | HUGHES, MAYSIE J   | HISTAMINE ACTION ON HEART MUSCLE AND ITS RECEPTOR                                       | 25,228  |
| INSTITUTION TOTAL  | 2  |   | 47,730  |
| CITY TOTAL   | 2  |   | 47,730  |
| STATE TOTAL  | 8  |   | 274,606 |
| <br>VIRGINIA<br>CHARLOTTESVILLE<br>UNIVERSITY OF VIRGINIA<br>HL16044-01          | AYERKS, CARLOS R   | RENIN SECRETION IN RENAL VASCULAR HYPERTENSION  |         |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH GRANTS \*

DOLLARS  
AWARDED

| GRANT NUMBER  | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL                          | DOLLARS AWARDED |
|---|------------------------|---|-----------------|
| VIRGINIA  |                        |   |                 |
| CHARLOTTESVILLE   |                        |   |                 |
| UNIVERSITY OF VIRGINIA  |                        |   |                 |
| AI11722-01  | EMERSON, SUZANNE U     | RHABDOVIRUS TRANSCRIPTION AND REPLICATION           | 30,538          |
| INSTITUTION TOTAL   | 2                      | 53,476  |                 |
| CITY TOTAL  | 2                      | 53,476  |                 |
| STATE TOTAL   | 2                      | 53,476  |                 |
| WASHINGTON  |                        |   |                 |
| PULLMAN   |                        |   |                 |
| WASHINGTON STATE UNIVERSITY                                     |                        |   |                 |
| AI11714-01  | BURGER, DIETER         | VIRUS-ANTIBODY COMPLEXES AND CHROMATOGRAPHY         | 18,801          |
| INSTITUTION TOTAL   | 1                      | 18,801  |                 |
| CITY TOTAL  | 1                      | 18,801  |                 |
| STATE TOTAL   | 1                      | 18,801  |                 |
| WEST VIRGINIA   |                        |   |                 |
| MORGANTOWN  |                        |   |                 |
| WEST VIRGINIA UNIVERSITY  |                        |   |                 |
| HL16216-01  | WU, WEN-HSIEN          | STUDIES OF PATHOPHYSIOLOGY OF VASOPRESSIN IN MAN    | 37,067          |
| INSTITUTION TOTAL   | 1                      | 37,067  |                 |
| CITY TOTAL  | 1                      | 37,067  |                 |
| STATE TOTAL   | 1                      | 37,067  |                 |
| WISCONSIN   |                        |   |                 |
| MADISON   |                        |   |                 |
| UNIVERSITY OF WISCONSIN SYSTEM--UNIVERSITY OF WISCONSIN-MADISON |                        |   |                 |
| CA15166-01  | DAHLBERG, JAMES E      | SMALL RNAS OF RNA TUMOR VIRUSES                     | 52,540          |
| INSTITUTION TOTAL   | 1                      | 52,540  |                 |
| CITY TOTAL  | 1                      | 52,540  |                 |
| STATE TOTAL   | 1                      | 52,540  |                 |
| CANADA  |                        |   |                 |
| EDMONTON  |                        |   |                 |
| UNIVERSITY OF ALBERTA   |                        |   |                 |
| AI11595-01  | DIENER, ERWIN          | ANTIGEN RECOGNITION MECHANISMS AND IMMUNE INDUCTION | 19,962          |
| * DOLLARS AWARDED INCLUDE DIRECT COST ONLY                      |                        |   |                 |

DOLLARS  
AWARDED

NIH  
RESEARCH GRANTS \*

| GRANT NUMBER   | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL                                |                                |
|--|------------------------|---|--------------------------------|
| INSTITUTION TOTAL  | 1                      |   | 19,962                         |
| CITY TOTAL   | 1                      |   | 19,962                         |
| STATE TOTAL  | 1                      |   | 19,962                         |
| <br>COSTA RICA<br>SAN JOSE<br>UNIVERSITY OF COSTA RICA<br>A111616-01   | <br>MORERA, PEDRO      | <br>STUDIES ON ABDOMINAL ANGIOSTRONGYLOSIS                | <br>8,250<br>8,250<br>8,250    |
| INSTITUTION TOTAL  | 1                      |   | 8,250                          |
| CITY TOTAL   | 1                      |   | 8,250                          |
| STATE TOTAL  | 1                      |   | 8,250                          |
| <br>ITALY<br>ROME<br>UNIVERSITY OF ROME<br>A116932-01                  | <br>MONACO, FABRIZIO   | <br>CARBOHYDRATES IN THYROGLOBULIN IN THYROID TUMOR       | <br>20,706<br>20,706<br>20,706 |
| INSTITUTION TOTAL  | 1                      |   | 20,706                         |
| CITY TOTAL   | 1                      |   | 20,706                         |
| STATE TOTAL  | 1                      |   | 20,706                         |
| <br>NEW ZEALAND<br>PALMERSTON NORTH<br>MASSEY UNIVERSITY<br>NS11238-01 | <br>JOLLY, ROBERT D    | <br>MANNOSIDOSIS - A MODEL FOR LYSOSOMAL STORAGE DISEASES | <br>24,600<br>24,600<br>24,600 |
| INSTITUTION TOTAL  | 1                      |   | 24,600                         |
| CITY TOTAL   | 1                      |   | 24,600                         |
| STATE TOTAL  | 1                      |   | 24,600                         |
| TOTAL  | 137                    |   | 8,670,869                      |

\* DOLLARS AWARDED INCLUDE DIRECT COST ONLY

NIH  
RESEARCH CONTRACTS

DOLLARS  
AWARDED

| CONTRACT NUMBER   | PROJECT DIRECTOR                      | SCOPE OF WORK  |                   |
|---|---------------------------------------|--|-------------------|
| <br>  |                                       |  |                   |
| CALIFORNIA<br>SAN FRANCISCO<br>UNIVERSITY OF CALIFORNIA SYSTEM--UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO<br>CB43856-00 | WYBRAN, JOSEPH                        | STUDY OF BLOOD SPECIMENS   | 37,147            |
| INSTITUTION TOTAL   | 1                                     |  | 37,147            |
| CITY TOTAL  | 1                                     |  | 37,147            |
| STATE TOTAL   | 1                                     |  | 37,147            |
| <br>  |                                       |  |                   |
| LOUISIANA<br>NEW IBERIA<br>GULF SOUTH RESEARCH INSTITUTE--ATCHAFALAYA BASIN LABORATORIES<br>RS42143-00                  | GREER, W E                            | SUPPORT FOR MONKEY-BREEDING COLONY   | 49,144            |
| INSTITUTION TOTAL   | 1                                     |  | 49,144            |
| CITY TOTAL  | 1                                     |  | 49,144            |
| STATE TOTAL   | 1                                     |  | 49,144            |
| <br>  |                                       |  |                   |
| MARYLAND<br>BALTIMORE<br>JOHNS HOPKINS UNIVERSITY<br>CN45037-00   | FROST, JOHN K                         | STUDY OF EARLY DETECTION OF CANCER OF THE LUNGS                                | 629,652           |
| INSTITUTION TOTAL   | 1                                     |  | 629,652           |
| CITY TOTAL  | 1                                     |  | 629,652           |
| STATE TOTAL   | 1                                     |  | 629,652           |
| <br>  |                                       |  |                   |
| NEW YORK<br>NEW YORK<br>CITY UNIVERSITY OF NEW YORK--MOUNT SINAI SCHOOL OF MEDICINE<br>CM43703-00<br>CP43225-00         | GREENSPAN, EZRA M<br>HOLLAND, JAMES F | STUDY OF CARCINOMA OF THE OVARIES<br>STUDY OF ETIOLOGY AND CONTROL OF LEUKEMIA | 49,878<br>189,548 |
| INSTITUTION TOTAL   | 2                                     |  | 239,426           |
| <br>  |                                       |  |                   |
| JAMAICA HOSPITAL<br>CN45034-00  | BARBER, HUGH                          | STUDY OF REHABILITATION SERVICES FOR CANCER PATIENTS.                          | 183,303           |
| INSTITUTION TOTAL   | 1                                     |  | 183,303           |



NIH  
RESEARCH CONTRACTS

DOLLARS  
AWARDED

| CONTRACT NUMBER  | PROJECT DIRECTOR        | SCOPE OF WORK  |             |
|--|-------------------------|--|-------------|
| NEW YORK<br>NEW YORK<br>MEMORIAL HOSPITAL FOR CANCER AND ALLIED DISEASES<br>CN45007-00   | MELAMED, M R            | STUDY OF EARLY DETECTION OF CANCER OF THE LUNGS            | 529,890     |
| INSTITUTION TOTAL  | 1                       |  | 529,890     |
| CITY TOTAL   | 4                       |  | 952,619     |
| <br>SARANAC LAKE<br>TRUDEAU INSTITUTE<br>AI42502-00  | <br>MACKANESS, GEORGE B | <br>ROLE OF CELL-MEDIATED IMMUNITY IN PARASITIC DISEASES   | <br>31,988  |
| INSTITUTION TOTAL  | 1                       |  | 31,988      |
| CITY TOTAL   | 1                       |  | 31,988      |
| STATE TOTAL  | 5                       |  | 984,607     |
| <br>OKLAHOMA<br>OKLAHOMA CITY<br>OKLAHOMA MEDICAL RESEARCH FOUNDATION<br>CB43864-00  | <br>KOLLMORGEN, G MARK  | <br>STUDY OF ANIMAL MODELS FOR EVALUATION OF IMMUNOTHERAPY | <br>128,350 |
| INSTITUTION TOTAL  | 1                       |  | 128,350     |
| CITY TOTAL   | 1                       |  | 128,350     |
| STATE TOTAL  | 1                       |  | 128,350     |
| <br>TENNESSEE<br>MEMPHIS<br>UNIVERSITY OF TENNESSEE SYSTEM--UNIVERSITY OF TENNESSEE MEDICAL UNITS<br>AM42219-00                  | <br>AUTIAN, JOHN        | <br>STUDY OF TOXICITY OF FLUIDS FLOWING THROUGH DIALYZERS  | <br>29,680  |
| INSTITUTION TOTAL  | 1                       |  | 29,680      |
| CITY TOTAL   | 1                       |  | 29,680      |
| STATE TOTAL  | 1                       |  | 29,680      |
| <br>PUERTO RICO<br>SAN JUAN<br>UNIVERSITY OF PUERTO RICO SYSTEM--UNIVERSITY OF PUERTO RICO MEDICAL SCIENCES CAMPUS<br>EY42142-00 | <br>BERROCAL, JOSE      | <br>CLINICAL STUDY OF DIABETIC RETINOPATHY                 | <br>48,652  |
| INSTITUTION TOTAL  | 1                       |  | 48,652      |

NIH  
RESEARCH CONTRACTS

DOLLARS  
AWARDED

| CONTRACT NUMBER | PROJECT DIRECTOR | SCOPE OF WORK |
|-----------------|------------------|---------------|
| CITY TOTAL      | 1                | 48,652        |
| STATE TOTAL     | 1                | 48,652        |
| TOTAL           | 11               | 1,907,232     |

DOLLARS  
AWARDEDNIH  
MEDICAL LIBRARY GRANTS

| GRANT NUMBER  | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL                   | DOLLARS AWARDED |
|---|------------------------|--|-----------------|
| CALIFORNIA  |                        |  |                 |
| IRVINE  |                        |  |                 |
| UNIVERSITY OF CALIFORNIA SYSTEM--UNIVERSITY OF CALIFORNIA AT IRVINE | SMITH, JOHN E          | MEDICAL LIBRARY RESOURCE PROJECT SUPPORT     | 18,425          |
| LM02129-01  |                        |  |                 |
| INSTITUTION TOTAL   | 1                      | 18,425                                       |                 |
| CITY TOTAL  | 1                      | 18,425                                       |                 |
| LOS ANGELES   |                        |  |                 |
| CALIFORNIA HOSPITAL MEDICAL CENTER                                  |                        |  |                 |
| LM02166-01  | DILLIBE, ANNE G        | MEDICAL LIBRARY RESOURCE IMPROVEMENT SUPPORT | 3,200           |
| INSTITUTION TOTAL   | 1                      | 3,200  |                 |
| CITY TOTAL  | 1                      | 3,200  |                 |
| REDDING   |                        |  |                 |
| SHASTA GENERAL HOSPITAL   |                        |  |                 |
| LM02149-01  | MARKS, OSCAR R         | MEDICAL LIBRARY RESOURCE IMPROVEMENT SUPPORT | 2,881           |
| INSTITUTION TOTAL   | 1                      | 2,881  |                 |
| CITY TOTAL  | 1                      | 2,881  |                 |
| STATE TOTAL   | 3                      | 24,506                                       |                 |
| ILLINOIS  |                        |  |                 |
| CHICAGO   |                        |  |                 |
| JACKSON PARK HOSPITAL   | BECK, CHARLES A        | MEDICAL LIBRARY RESOURCE IMPROVEMENT SUPPORT | 3,000           |
| LM02069-01  |                        |  |                 |
| INSTITUTION TOTAL   | 1                      | 3,000  |                 |
| CITY TOTAL  | 1                      | 3,000  |                 |
| PEORIA  |                        |  |                 |
| METHODIST HOSPITAL OF CENTRAL ILLINOIS                              |                        |  |                 |
| LM02061-01  | BROWN, TRUDY           | MEDICAL LIBRARY RESOURCE IMPROVEMENT SUPPORT | 3,000           |
| INSTITUTION TOTAL   | 1                      | 3,000  |                 |
| CITY TOTAL  | 1                      | 3,000  |                 |
| STATE TOTAL   | 2                      | 6,000  |                 |

NIH  
MEDICAL LIBRARY GRANTS

DOLLARS  
AWARDED

| GRANT NUMBER   | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL                   |        |
|--|------------------------|--|--------|
| IOWA   |                        |  |        |
| IOWA CITY  |                        |  |        |
| UNIVERSITY OF IOWA   |                        |  |        |
| LM02081-01   | CRYDER, ROBERT W       | REGIONAL MEDICAL LIBRARY SUPPORT             | 29,343 |
|  |                        |  | 29,343 |
| INSTITUTION TOTAL  | 1                      |  |        |
| CITY TOTAL   | 1                      |  |        |
| STATE TOTAL  | 1                      |  | 29,343 |
| MINNESOTA  |                        |  |        |
| DULUTH   |                        |  |        |
| UNIVERSITY OF MINNESOTA  |                        |  |        |
| LM02135-01   | HAFNER, ARTHUR W       | MEDICAL LIBRARY RESOURCE PROJECT SUPPORT     | 16,029 |
|  |                        |  | 16,029 |
| INSTITUTION TOTAL  | 1                      |  |        |
| CITY TOTAL   | 1                      |  |        |
| STATE TOTAL  | 1                      |  | 16,029 |
| MISSISSIPPI  |                        |  |        |
| MERIDIAN   |                        |  |        |
| RUSH FOUNDATION HOSPITAL   |                        |  |        |
| LM02172-01   | BURNETT, FRANCES       | MEDICAL LIBRARY RESOURCE IMPROVEMENT SUPPORT | 3,000  |
|  |                        |  | 3,000  |
| INSTITUTION TOTAL  | 1                      |  |        |
| CITY TOTAL   | 1                      |  |        |
| STATE TOTAL  | 1                      |  | 3,000  |
| NEBRASKA   |                        |  |        |
| OMAHA  |                        |  |        |
| UNIVERSITY OF NEBRASKA SYSTEM--UNIVERSITY OF NEBRASKA MEDICAL CENTER |                        |  |        |
| LM02080-01   | HEITZNER, BERNICE M    | REGIONAL MEDICAL LIBRARY SUPPORT             | 22,489 |
|  |                        |  | 22,489 |
| INSTITUTION TOTAL  | 1                      |  |        |
| CITY TOTAL   | 1                      |  |        |
| STATE TOTAL  | 1                      |  | 22,489 |
| NEW YORK   |                        |  |        |
| NEW YORK   |                        |  |        |
| LUTHERAN MEDICAL CENTER  |                        |  |        |
| LM02164-01   | DUCHAC, GRETCHEN N     | MEDICAL LIBRARY RESOURCE IMPROVEMENT SUPPORT | 3,000  |

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MEDICAL LIBRARY GRANTS

DOLLARS  
AWARDED

| GRANT NUMBER                 | PRINCIPAL INVESTIGATOR | TITLE OF RESEARCH PROPOSAL                   | DOLLARS AWARDED |
|------------------------------|------------------------|--|-----------------|
| INSTITUTION TOTAL            | 1                      | 3,000  |                 |
| CITY TOTAL                   | 1                      | 3,000  |                 |
| STATE TOTAL                  | 1                      | 3,000  |                 |
| VIRGINIA                     |                        |  |                 |
| WINCHESTER                   |                        |  |                 |
| WINCHESTER MEMORIAL HOSPITAL |                        |  |                 |
| LM02174-01                   | NAPPS, CARL S          | MEDICAL LIBRARY RESOURCE IMPROVEMENT SUPPORT | 3,000           |
| INSTITUTION TOTAL            | 1                      | 3,000  |                 |
| CITY TOTAL                   | 1                      | 3,000  |                 |
| STATE TOTAL                  | 1                      | 3,000  |                 |
| WISCONSIN                    |                        |  |                 |
| CUDAHY                       |                        |  |                 |
| TRINITY MEMORIAL HOSPITAL    |                        |  |                 |
| LM02127-01                   | CAMERON, PAT           | MEDICAL LIBRARY RESOURCE IMPROVEMENT SUPPORT | 3,060           |
| INSTITUTION TOTAL            | 1                      | 3,060  |                 |
| CITY TOTAL                   | 1                      | 3,060  |                 |
| STATE TOTAL                  | 1                      | 3,060  |                 |
| PUERTO RICO                  |                        |  |                 |
| HUMACAO                      |                        |  |                 |
| RYDER MEMORIAL HOSPITAL      |                        |  |                 |
| LM02084-01                   | FLORES, SATURNINO P    | MEDICAL LIBRARY RESOURCE IMPROVEMENT SUPPORT | 3,051           |
| INSTITUTION TOTAL            | 1                      | 3,051  |                 |
| CITY TOTAL                   | 1                      | 3,051  |                 |
| STATE TOTAL                  | 1                      | 3,051  |                 |
| TOTAL                        | 13                     | 113,478                                      |                 |

3,060

3,051





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